



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/566,716

02/01/2006

Makoto Saito

4495-092

8965

22429

7590

02/02/2009

LOWE HAUPTMAN HAM & BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314

EXAMINER

O BRIEN, JEFFREY D

ART UNIT

PAPER NUMBER

3677

MAIL DATE

DELIVERY MODE

02/02/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,716	Applicant(s) SAITO ET AL.	
	Examiner Jeffrey O'Brien	Art Unit 3677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 6, 12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: "the stationary-side member" lacks antecedent basis. For purposes of examinations, this has been taken to mean "a stationary-side member".
2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 5, 8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Duffy (US 6,619,723) herein referred to as '723.
5. For Claim 1, '723 discloses a hinge device comprising: a friction-force generating mechanism (annotated Fig. 7: A) that has a shaft (B) supporting--rotatably in both the forward and reverse directions--a rotation-side member (Fig. 1: 20) on a stationary-side member (46), and that uses friction force to hold the angle of the rotated rotation-side member, and a torsion bar (Fig 3: 60) that penetrates through said shaft in the axial direction in such a way that parts of said torsion bar are exposed outside both ends of said shaft (as seen in Fig. 7), with one end (80) of said torsion bar directly or indirectly fixed to said stationary-side member (46), and the other end (Fig. 4: 64) of said torsion bar directly or indirectly fixed to the rotation-side member (20), and that--by being

Art Unit: 3677

twisted by the rotation of the rotation-side member in either the forward or reverse direction--stores torque that energizes the rotation-side member in the direction opposite to said rotation of the rotation-side member.

6. For Claim 2, '723 discloses a hinge device as set forth in claim 1, wherein said torsion bar is arranged in such a way that the torque is approximately zero when the rotation-side member is approximately perpendicular to the stationary-side member, and that said torque increases as the angle of the rotation-side member changes, from its approximately perpendicular position, due to the rotation of the rotation-side member in the forward or reverse direction (Column 5, Lines 41-64).

7. For Claims 3 and 8, '723 discloses a hinge device as set forth in claims 1 and 2, wherein a stationary side hinge bracket (40), which is connected with said stationary side member (46), and a rotation side hinge bracket (26), which is connected with said rotation side member (20), are attached to said shaft (B), and said torsion bar penetrates through said stationary side and rotation side hinge brackets (as seen in Fig. 7).

8. For Claims 5 and 11, '723 discloses a hinge device as set forth in claims 3 and 4, wherein one end (64) of said torsion bar (60) is fixed to and engaged with either said stationary side hinge bracket (40) or said rotation side hinge bracket (26).

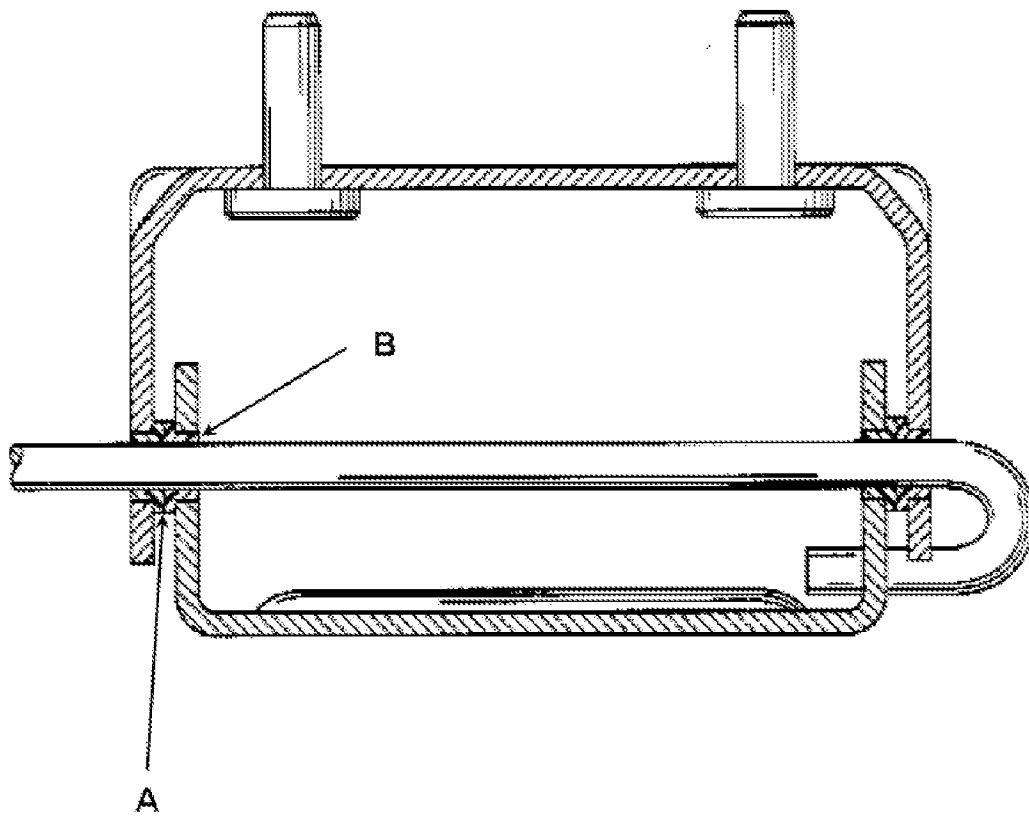


Fig. 7

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 4, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duffy (US 6,619,723) herein referred to as '723.

12. For Claims 4, 9 and 10, '723 discloses a hinge device as set forth in claim 1, 2 and 3, wherein at least one end of said torsion bar is exposed outside the shaft. '723 does not disclose wherein the exposed end is directly fixed to either the stationary-side member or the rotation side member. '723 instead teaches ends of the torsion bar connected to the stationary side hinge bracket and rotation side hinge bracket which are in turn fixed to the stationary-side member and rotation side member. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have fixed one or both ends of the torsion bar directly to the stationary-side member or rotation-side member as it has been held that rearranging parts of an invention involves

Art Unit: 3677

only routine skill in the art. *In re Japikse*, 86 USPQ 70. See also, *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975). It is further noted that It would have been an obvious matter of design choice to directly attach either or both ends of the torsion bar directly to the stationary-side member or rotation-side member, as Applicant has not disclosed that it solves any stated problem of the prior art. It appears that the directly fixed torsion bar would perform equally well as the torsion bar fixed via the bracket members disclosed by '723.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Duffy (US 6,619,723) herein referred to as '723 as applied to claim 1 above further in view of Kaneko et al. (US 6,421,878) herein referred to as '878.

14. For Claim 7, '723 discloses a hinge device as set forth in claim 1, except wherein said friction-force generating mechanism is equipped with a spring washer that is formed so as to have a U-shaped cross-section, and directly or indirectly overlaps and comes into contact with said shaft under a condition that the spring washer is bent.

15. Spring washers are well know friction generating elements in the hinge art as demonstrated by '878 which teaches a hinge having a friction-force generating mechanism equipped with a spring washer (Fig. 1: 7a) that is formed so as to have a U-shaped cross-section, and directly or indirectly overlaps and comes into contact with a shaft (2) under a condition that the spring washer is bent. It would have been obvious to one of ordinary skill in the art to apply the spring washer of '878 to the hinge of '540 in order to allow for precise tuning of the frictional forces applied to the hinge to control the range of angles at which the hinged device is useable.

Response to Arguments

16. Applicant's arguments filed 12/30/2008 have been fully considered but they are not persuasive.

17. Applicant's arguments with respect to claims 1-5 and 8-11 have been considered but are moot in view of the new ground(s) of rejection.

18. Regarding Claim 7, Applicant argues that the spring washer of '878 would not be appropriately combined as it is taught with a combination of washers, however, '878 is used as a modifying reference and would be capable of providing increased friction between the surfaces of the shaft and bracket member, this friction could be further controlled or a greater friction applied by applying a plurality of washers and spring washers to the hinge member, such as that of '878.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3677

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey O'Brien whose telephone number is (571)270-3655. The examiner can normally be reached on Monday through Friday 8:00am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached on 571-272-6987. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor Batson/
Supervisory Patent Examiner, Art Unit 3677

/JO/
JO